UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,399	07/01/2005	Sang-Hyeon Kim	P2947US00	6318

58027   7590   12/02/2009
H.C. PARK & ASSOCIATES, PLC
8500 LEESBURG PIKE
SUITE 7500
VIENNA, VA 22182

EXAMINER
SCOTT, RANDY A

ART UNIT	PAPER NUMBER
2453	

NOTIFICATION DATE	DELIVERY MODE
12/02/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATENT@PARK-LAW.COM

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _15 July 2009_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-4,8-16,33-41,43-45 and 47-54_ is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-4, 8-16, 33-41, 43-45, 47-54_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☒ All   b)☐ Some * c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

<center>DETAILED ACTION</center>

1.   This Office Action is responsive to the application filed 7/15/2005

2.   Claims 1-16 and 33-54 are pending in the present application. Claims 5-7, 17-32, 42 and

46 have been canceled, claims 33-38 have been withdrawn, claims 1-4, 8, 12, 16, 39-41 and 47-

49 have been amended.

<center>**Claim Rejections - 35 USC § 103**</center>

     The following is a quotation of 35 U.S.C. 103(a) which

forms the basis for all obviousness rejections set forth in this

Office action:

     (a) A patent may not be obtained though the invention is not identically
     disclosed or described as set forth in section 102 of this title, if the
     differences between the subject matter sought to be patented and the prior
     art are such that the subject matter as a whole would have been obvious at
     the time the invention was made to a person having ordinary skill in the
     art to which said subject matter pertains. Patentability shall not be
     negatived by the manner in which the invention was made.

3.   Claims 1-4, 8, 14, 16, 39-41, 45-49, 52, and 54 are rejected under 35 USC 103 (a) as

being unpatentable over Carmel et al (US 6,389,473) in view of Yao et al (US 5,956,321).

     Regarding claims 1 and 39, Carmel et al discloses:

     Establishing connections between a user client and a plurality of nodes (see fig. 4);

dividing streaming data into a plurality of blocks for sequential download (see fig. 3a and col. 3,

lines 30-32), said plurality of blocks including a first and second blocks (see col. 3, lines 40-41,

"sequence of slices");

dividing the first block of said streaming data into a plurality of sub blocks (see col. 7, lines 25-30); monitoring download state of the established connections (see col. 2, lines 50-52), said user client receiving said sub blocks from said respective nodes via said established connections in parallel (see col. 9, lines 28-30); and

redistributing said sub blocks of a bad connection to other node for download if one of said established connections is determined to be the bad connection based on said monitored download state (see col. 10, lines 10-14, which teaches retransmission due to broken links);

wherein the step of sending a request, the step of monitoring download state and the step of redistributing said sub blocks are repeated for downloading sub blocks included in the second block when download of all sub blocks included in the first block is completed (see fig. 8 and col. 12, lines 24-26).

However, Carmel et al does not specifically teach sending a request for at least one of said sub blocks to the plurality of nodes where connection is established to download the sub blocks.

Yao et al provides the deficiencies not taught by Carmel et al (see col. 5, lines 47-51, which discloses transferring data blocks of the requested data stream for an established connection).

It would have been obvious to one of ordinary skill in the art to combine Carmel et al with the general concepts of sending a request for at least one of said sub blocks to the plurality of nodes where connection is established to download the sub blocks with the motivation in that Yao et al also teaches a method for downloading streaming data, as illustrated by Yao et al in order to sufficiently implement a image transmission system for streaming info.

Regarding claims 2 and 40, Carmel et al discloses:

Matching said plurality of sub blocks included in the first block with each of said nodes (see col. 3, lines 19-22).

Regarding claims 3 and 47, Carmel et al discloses:

Monitoring completion of download for each of said connected nodes, the step of redistributing said sub blocks comprises the step of redistributing sub blocks from a first node to a second node when download is completed at the second node (see col. 10, lines 12-24, which teaches that the file re-transmission occurs until the broadcast has completed).

Regarding claims 4 and 41, Carmel et al discloses:

Wherein said match of the sub blocks and the nodes is determined based on connection state valuation index, the connection state valuation index being calculated using information selected from group consisting of round-trip time with each of the nodes and average download speed from each of the nodes (see col. 13, lines 16-19).

Regarding claims 8 and 49, Carmel et al discloses:

Determining redistribution of said sub blocks from the first node to the second node based on the download rate and a number of remaining sub blocks of the first node (see col. 2, lines 55-58).

Regarding claim 48, Carmel et al discloses:

The method wherein the first node has the lowest download rate among the connected

nodes (see col. 2, lines 57-59).

Regarding claims 14 and 52, Carmel et al discloses:

The step of sending a request for sub blocks to corresponding nodes by the redistribution

result to download redistributed sub blocks after redistribution of sub blocks (see col. 10, lines 9-

15).

Regarding claims 16 and 54, Carmel et al discloses:

Monitoring state information of nodes which are not transmitting data among nodes

where connection is established (see fig. 9) and redistributing sub blocks to be downloaded

between some of the nodes which are transmitting data and some of the nodes which are not

transmitting data (see col. 9, lines 22-27).

4.   Claims 9 and 50 are rejected under 35 USC 103 (a) as being unpatentable over Carmel et

al (US 6,389,473) in view of Yao et al (US 5,956,321), further in view of Vigue et al (US

7,181,506).

Regarding claims 9 and 50, Carmel et al discloses the limitations previously discussed.

However, Carmel et al does not specifically teach the step of storing information of nodes

with which the connection establishment failed in a black list queue.

Yao et al provides the deficiencies not taught by Carmel et al (see col. 5, lines 47-51,

which discloses transferring data blocks of the requested data stream for an established

connection).

It would have been obvious to one of ordinary skill in the art to combine Carmel et al

with the general concepts of sending a request for at least one of said sub blocks to the plurality

of nodes where connection is established to download the sub blocks with the motivation in that

Yao et al also teaches a method for downloading streaming data, as illustrated by Yao et al in

order to sufficiently implement a image transmission system for streaming info.

Carmel et al and Yao et al do not specifically teach the step of storing information of

nodes with which the connection establishment failed in a black list queue.

Vigue et al provides the deficiencies not taught by Carmel et al (see col. 2, lines 40-44).

It would have been obvious to one of ordinary skill in the art to combine Carmel et al and

Yao et al with the general concepts of storing information of nodes with which the connection

establishment failed in a black list queue motivation in that Vigue et al also teaches a method for

packet streaming within a network, as illustrated by Yao et al in order to sufficiently implement a

image transmission system for streaming info.

5.   Claims 15 and 53 are rejected under 35 USC 103 (a) as being unpatentable over Carmel

et al (US 6,389,473) in view of Yao et al (US 5,956,321), further in view of Garcia-Luna-Aceves

et al (US 2002/0004846).

Regarding claims 15 and 53, Carmel et al discloses the limitations previously discussed.

However, Carmel et al does not specifically teach the step of storing information of nodes with which the connection establishment failed in a black list queue.

Yao et al provides the deficiencies not taught by Carmel et al (see col. 5, lines 47-51, which discloses transferring data blocks of the requested data stream for an established connection).

It would have been obvious to one of ordinary skill in the art to combine Carmel et al with the general concepts of sending a request for at least one of said sub blocks to the plurality of nodes where connection is established to download the sub blocks with the motivation in that Yao et al also teaches a method for downloading streaming data, as illustrated by Yao et al in order to sufficiently implement a image transmission system for streaming info.

Carmel et al and Yao et al do not specifically teach the step of downloading streaming data by connecting to a singular server if sub block download from the plurality of the nodes fails.

Garcia-Luna-Aceves et al et al provides the deficiencies not taught by Carmel et al (see fig. 5 & sec [0099], lines 16-22).

It would have been obvious to one of ordinary skill in the art to combine Carmel et al and Yao et al with the general concepts of the step of downloading streaming data by connecting to a singular server if sub block download from the plurality of the nodes fails motivation in that Garcia-Luna-Aceves et al also teaches a method for packet streaming within a network, as illustrated by Garcia-Luna-Aceves et al in order to sufficiently implement a image transmission system for streaming info.

6.   Claims 10-12 and 43-45 are rejected under 35 USC 103 (a) as being unpatentable over

Carmel et al (US 6,389,473) in view of Yao et al (US 5,956,321), further in view of Taniguchi et

al (US 6,445,679).

        With respect to claims 10 and 43, Carmel et al (US 6,389,473) discloses the limitations

previously discussed.

        However, Carmel et al does not specifically teach the steps of wherein the sub blocks to

be downloaded from each of the nodes are determined using the node state information.

        With respect to claims 10 and 43, Yao et al (US 5,956,321) discloses the limitations

previously discussed.

        However, Carmel et al and Yao et al do not specifically teach the steps of wherein the sub

blocks to be downloaded from each of the nodes are determined using the node state information.

        Taniguchi et al discloses the general concept of: wherein the sub blocks to be

downloaded from each of the nodes are determined using the node state information (see col. 38,

lines 56-64).

        It would have been obvious to one of ordinary skill in the art to combine Carmel et al and

Yao et al with the general concept of wherein the sub blocks to be downloaded from each of the

nodes are determined using the node state information, as illustrated by Taniguchi et al with the

motivation of all references providing data block transmission for network nodes (ass taught in

col. 2, lines 55-61 of Taniguchi et al) in order to consistently stream transfer by data

segmentation.

With respect to claims 11 and 44, Carmel et al (US 6,389,473) discloses the limitations previously discussed.

However, Carmel et al does not specifically teach the steps of wherein the sub blocks to be downloaded from each of the nodes are determined using the node state information.

With respect to claims 11 and 44, Yao et al (US 5,956,321) discloses the limitations previously discussed.

However, Carmel et al and Yao et al do not specifically teach wherein sub blocks to be downloaded from each of the nodes are determined by state information of nodes in initial state of download, after determination of download speed from each of the nodes, sub blocks to be downloaded from each of the nodes are determined using connection state valuation index which is calculated using information selected from group consisting of round-trip time with each of the nodes and average download speed from each of the nodes.

Taniguchi et al discloses the general concepts of: wherein sub blocks to be downloaded from each of the nodes are determined by state information of nodes in initial state of download (see col. 3, lines 29-33), after determination of download speed from each of the nodes, sub blocks to be downloaded from each of the nodes are determined using connection state valuation index which is calculated using information selected from group consisting of round-trip time with each of the nodes and average download speed from each of the nodes (see col. 2, lines 44-48, which discloses transmission rate calculation).

It would have been obvious to one of ordinary skill in the art to combine Carmel et al and Yao et al with the general concept of wherein sub blocks to be downloaded from each of the nodes are determined by state information of nodes in initial state of download, after

determination of download speed from each of the nodes, sub blocks to be downloaded from

each of the nodes are determined using connection state valuation index which is calculated

using information selected from group consisting of round-trip time with each of the nodes and

average download speed from each of the nodes, as illustrated by Taniguchi et al with the

motivation of all references providing data block transmission for network nodes (ass taught in

col. 2, lines 55-61 of Taniguchi et al) in order to consistently stream transfer by data

segmentation.

      With respect to claims 12 and 45, Carmel et al (US 6,389,473) discloses the limitations

previously discussed.

      However, Carmel et al does not specifically teach the steps of wherein the sub blocks to

be downloaded from each of the nodes are determined using the node state information.

      With respect to claims 12 and 45, Yao et al (US 5,956,321) discloses the limitations

previously discussed.

      However, Carmel et al and Yao et al do not specifically teach wherein the connection

establishment with the plurality of nodes is performed using state information of the nodes in

step of establishing connections.

      Taniguchi et al discloses the general concepts of: wherein the connection establishment

with the plurality of nodes is performed using state information of the nodes in step of

establishing connections (see col. 9, lines 18-25).

      It would have been obvious to one of ordinary skill in the art to combine Carmel et al and

Yao et al with the general concept of wherein the connection establishment with the plurality of

nodes is performed using state information of the nodes in step of establishing connections, as

illustrated by Taniguchi et al with the motivation of all references providing data block

transmission for network nodes (ass taught in col. 2, lines 55-61 of Taniguchi et al) in order to

consistently stream transfer by data segmentation.

7.   Claims 13 and 51 are rejected under 35 USC 103 (a) as being unpatentable over Carmel

et al (US 6,389,473) in view of Yao et al (US 5,956,321), further in view Liva et al (US

2002/0136203).

                     With respect to claims 12 and 45, Carmel et al (US 6,389,473) discloses the

limitations previously discussed.

        However, Carmel et al does not specifically teach the steps of wherein the sub blocks to

be downloaded from each of the nodes are determined using the node state information.

        With respect to claims 12 and 45, Yao et al (US 5,956,321) discloses the limitations

previously discussed.

        However, Carmel et al and Yao et al do not specifically teach determining download

error using checksum value of downloaded sub blocks.

        Liva et al discloses the general concept of: determining download error using checksum

value of downloaded sub blocks (see sec [0087], lines 5-7, "sub-block" & "checksum").

        It would have been obvious to one of ordinary skill in the art to combine Padmanabham

et al with the general concept of determining download error using checksum value of

downloaded sub blocks, as illustrated by Liva et al in order to successfully control packet

transmission in a network.

8.   *Response to Arguments*

9.   Applicant's arguments filed on 7/15/09 have been fully considered but are moot in view

of new grounds of rejection.

A.   In response to the applicant's argument that Padmanabham et al (US 2004/0143672) fails

to teach or suggest a sequential or parallel streaming or an automatic redistribution function:

Based on the new grounds of rejections, Carmel et al (US 6,389,473) has been cited and

discloses limitations for establishing connections between a user client and a plurality of nodes

(see fig. 4);

dividing streaming data into a plurality of blocks for sequential download (see fig. 3a and col. 3,

lines 30-32), said plurality of blocks including a first and second blocks (see col. 3, lines 40-41,

"sequence of slices");

dividing the first block of said streaming data into a plurality of sub blocks (see col. 7, lines 25-

30); monitoring download state of the established connections (see col. 2, lines 50-52), said user

client receiving said sub blocks from said respective nodes via said established connections in

parallel (see col. 9, lines 28-30); and

redistributing said sub blocks of a bad connection to other node for download if one of said

established connections is determined to be the bad connection based on said monitored

download state (see col. 10, lines 10-14, which teaches retransmission due to broken links);

wherein the step of sending a request, the step of monitoring download state and the step of redistributing said sub blocks are repeated for downloading sub blocks included in the second block when download of all sub blocks included in the first block is completed (see fig. 8 and col. 12, lines 24-26).

B.   In response to the applicant's allegation that Padmanabham et al (US 2004/0143672) fails to teach or suggest redistribution of assigned sub-streams to other destination trees when said other distribution trees complete downloading operation of its own assigned sub-stream:

Carmel et al teaches redistributing said sub blocks of a bad connection to other node for download if one of said established connections is determined to be the bad connection based on said monitored download state (see col. 10, lines 10-14, which teaches retransmission due to broken links); wherein the step of sending a request, the step of monitoring download state and the step of redistributing said sub blocks are repeated for downloading sub blocks included in the second block when download of all sub blocks included in the first block is completed (see fig. 8 and col. 12, lines 24-26).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are

representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Randy A. Scott whose telephone number is (571) 272-3797. The examiner can normally be reached on Monday-Thursday 7:30 am-5:00 pm, second Fridays 7:30 am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Thomas can be reached on (571) 272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/RANDY SCOTT/

Examiner, Art Unit 2453

20091030

/Joseph Thomas/

Supervisory Patent Examiner, Art Unit 2453